

Title (en)

METHODS AND COMPOSITIONS FOR PRODUCING SECRETED TRIMERIC RECEPTOR ANALOGS AND BIOLOGICALLY ACTIVE FUSION PROTEINS

Title (de)

VERFAHREN UND ZUSAMMENSETZUNGEN ZUR HERSTELLUNG SEZERNIERTER TRIMERER REZEPTORANALOGE UND BIOLOGISCH AKTIVER FUSIONSPROTEINE

Title (fr)

PROCEDES ET COMPOSITIONS DE PRODUCTION D'ANALOGUES DE RECEPTEURS TRIMERES SECRETES ET DE PROTEINES DE FUSION ACTIVES SUR LE PLAN BIOLOGIQUE

Publication

**EP 1671097 A4 20100421 (EN)**

Application

**EP 04809864 A 20041004**

Priority

- US 2004032753 W 20041004
- US 67787703 A 20031002

Abstract (en)

[origin: WO2005047850A2] Methods and compositions for producing secreted soluble receptors and biologically active polypeptides in trimeric forms are disclosed. The process involves fusing the DNA template encoding a soluble receptor with a ligand binding domain or biologically active polypeptide to a DNA sequence encoding a C-propeptide of collagen, which is capable of self-assembly into a covalently linked trimer. The resulting fusion proteins are secreted as trimeric soluble receptor analogs, which can be used for more efficient neutralization of the biological activities of their naturally occurring trimeric ligands.

IPC 8 full level

**C12N 15/62** (2006.01); **C07H 21/04** (2006.01); **C07K 14/705** (2006.01); **C07K 14/715** (2006.01); **C07K 14/78** (2006.01); **C12N 9/16** (2006.01); **C12N 15/55** (2006.01); **C12P 21/04** (2006.01)

IPC 8 main group level

**G01N** (2006.01)

CPC (source: EP US)

**A61P 3/10** (2017.12 - EP); **A61P 19/02** (2017.12 - EP); **A61P 31/04** (2017.12 - EP); **A61P 31/12** (2017.12 - EP); **A61P 31/18** (2017.12 - EP); **A61P 35/00** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C07K 14/70578** (2013.01 - EP US); **C07K 14/7151** (2013.01 - EP US); **C07K 14/78** (2013.01 - EP US); **C07K 2319/32** (2013.01 - EP US); **C07K 2319/735** (2013.01 - EP US)

Citation (search report)

- [XI] EP 0985732 A2 20000315 - TERUMO CORP [JP]
- [XY] WO 02090553 A2 20021114 - APOTECH RES & DEV LTD [CH], et al
- [Y] US 5605690 A 19970225 - JACOBS CINDY A [US], et al
- [A] WO 9708311 A1 19970306 - UNIV MANCHESTER [GB], et al
- [X] WO 9531540 A1 19951123 - MEDICAL RES COUNCIL [GB], et al
- [YD] MOHLER K M ET AL: "SOLUBLE TUMOUR NECROSIS FACTOR (TNF) RECEPTORS ARE EFFECTIVE THERAPEUTIC AGENTS IN LETHAL ENDOTOXEMIA AND FUNCTION SIMULTANEOUSLY AS BOTH TNF CARRIERS AND TNF ANTAGONISTS", JOURNAL OF IMMUNOLOGY, AMERICAN ASSOCIATION OF IMMUNOLOGISTS, US, vol. 151, no. 3, 1 August 1993 (1993-08-01), pages 1548 - 1561, XP008087691, ISSN: 0022-1767
- [XYI] HAYASHI MASAHIRO ET AL: "Production of EGF-collagen chimeric protein which shows the mitogenic activity", BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1528, no. 2-3, 3 October 2001 (2001-10-03), pages 187 - 195, XP002571516, ISSN: 0006-3002
- [XI] HOLLER N ET AL: "Development of improved soluble inhibitors of FasL and CD40L based on oligomerized receptors", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 237, no. 1-2, 1 April 2000 (2000-04-01), pages 159 - 173, XP004192503, ISSN: 0022-1759
- [X] KISHORE U ET AL: "A recombinant homotrimer, composed of the alpha helical neck region of human surfactant protein D and C1q B chain globular domain, is an inhibitor of the classical complement pathway", JOURNAL OF IMMUNOLOGY, AMERICAN ASSOCIATION OF IMMUNOLOGISTS, US, vol. 166, no. 1, 1 January 2001 (2001-01-01), pages 559 - 565, XP002228057, ISSN: 0022-1767
- [A] LOCKSLEY R M ET AL: "THE TNF AND TNF RECEPTOR SUPERFAMILIES: INTEGRATING MAMMALIAN BIOLOGY", CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 104, 23 February 2001 (2001-02-23), pages 487 - 501, XP002951130, ISSN: 0092-8674
- [X] MCALINDEN AUDREY ET AL: "Trimerization of the amino propeptide of type IIA procollagen using a 14-amino acid sequence derived from the coiled-coil neck domain of surfactant protein D", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 277, no. 43, 25 October 2002 (2002-10-25), pages 41274 - 41281, XP002571517, ISSN: 0021-9258
- [A] BULLEID N J ET AL: "The C-propeptide domain of procollagen can be replaced with a transmembrane domain without affecting trimer formation or collagen triple helix folding during biosynthesis", EMBO JOURNAL, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 16, no. 22, 17 November 1997 (1997-11-17), pages 6694 - 6701, XP002250165, ISSN: 0261-4189
- See references of WO 2005047850A2

Cited by

EP3947475A4; US9724390B2; US10232017B2; US11377490B2; US11472873B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2005047850 A2 20050526; WO 2005047850 A3 20071206;** CN 101146818 A 20080319; CN 101146818 B 20120530;  
EP 1671097 A2 20060621; EP 1671097 A4 20100421; EP 1671097 B1 20130814; ES 2433127 T3 20131209; JP 2007519611 A 20070719;  
JP 5077924 B2 20121121; US 2005202537 A1 20050915; US 2007087413 A1 20070419; US 2007117755 A1 20070524;  
US 7268116 B2 20070911; US 7666837 B2 20100223; US 7691815 B2 20100406

DOCDB simple family (application)

**US 2004032753 W 20041004**; CN 200480028746 A 20041004; EP 04809864 A 20041004; ES 04809864 T 20041004;  
JP 2006534253 A 20041004; US 64328506 A 20061221; US 64356806 A 20061221; US 67787703 A 20031002